Patent claims

1. A turbine blade (10, 11), which has a blade height, a rotor-side end (9) and a stator-side end (7), a leading edge (13) and trailing edge (14), and a suction side (22) and delivery side (23) and which is designed for use in relation to a general direction of flow (4), characterized in that the turbine blade (10, 11) has a negative sweep in the direction of flow (4) at its rotor-side end (9) and at its stator-side end (7).

2. The turbine blade (10, 11) as claimed in claim 1, characterized in that the negative sweep of the rotor-side end (9) merges into a positive sweep in the middle region (8) of the turbine blade (10, 11), and the positive sweep in the middle region (8) merges into a negative sweep at the stator-side end (7).

3. A turbine blade (10, 11), which has a blade height, a rotor-side end (9) and a stator-side end (7), a leading edge (13) and trailing edge (16), and a suction side (22) and delivery side (21) and which is designed for use in relation to a general direction of flow (4), characterized in that the turbine blade (10, 11) is inclined toward the delivery side (21) at its rotor-side end (9) and at its stator-side end (7) in a radial direction (34) with respect to the direction of flow (4).

4. The turbine blade (10, 11) as claimed in claim 1 or 2, characterized in that the turbine blade (10, 11) is inclined toward the delivery side (21) at its rotor-side end (9) and at its stator-side end (7) in a radial direction (34) with respect to the direction of flow (4).

5. The turbine blade (10, 11) as claimed in either one of claims 3 and 4, characterized in that the turbine blade (10, 11) is inclined toward the suction side (22) in a middle region (8) of the turbine blade (10, 11).

6. The turbine blade (10, 11) as claimed in one of claims 1 to 5, characterized in that the leading edge (13) and trailing edge (14) lie one behind the other essentially in the direction of flow (4) at the stator-side end (7).

7. The turbine blade (10, 11) as claimed in one of claims 1 to 6, characterized in that the leading edge (13) and trailing edge (14) lie one behind the other essentially in the direction of flow (4) at the rotor-side end (9).

8. The turbine blade (10, 11) as claimed in one of claims 1 to 7, characterized in that the trailing edge (14), in the middle region (8) of the blade height, is displaced toward the delivery side (21) in the direction of flow with respect to the leading edge (13).

9. The turbine blade (10, 11) as claimed in one of claims 1 to 8, characterized in that the stator-side end (7) is displaced toward the delivery side (21) in the radial direction (34) with respect to the rotor-side end (9).

10. The turbine blade (10, 11) as claimed in one of claims 1 to 9, characterized in that the rotor-side end (9) and the stator-side end (7) lie essentially one above the other in the direction of flow (4).

11. The turbine blade (10, 11) as claimed in one of claims 1 to 10, which is designed as a guide blade (10).

12. The turbine blade (10, 11) as claimed in one of claims 1 to 10, which is designed as a moving blade (11).

13. The turbine blade (10, 11) as claimed in one of claims 1 to 12, characterized in that the rotor-side end (9) is swept at an angle α with respect to the direction of flow, and the angle α has values which lie essentially between 50° and 80°.

14. The turbine blade (10, 11) as claimed in one of claims 1 to 13, characterized in that the stator-side end (7) is swept at an angle β with respect to an inner casing (6), and the angle β has values which lie essentially between 0° and 90°.

15. The turbine blade (10, 11) as claimed in one of claims 1 to 14, characterized in that the stator-side end (7) is inclined at an angle γ with respect to the radial direction (34), and the angle γ has values which lie essentially between 0° and 90°.

16. The turbine blade (10, 11) as claimed in claim 15, characterized in that the angle γ amounts essentially to 70°.

17. The turbine blade (10, 11) as claimed in one of claims 1 to 16, characterized in that

the rotor-side end (9) is inclined at an angle δ with respect to the radial direction (34), and the angle δ has values which lie essentially between 0° and 90°.

18. The turbine blade (10, 11) as claimed in claim 17, characterized in that the angle δ amounts essentially to 75°.

19. A turbomachine, which has turbine blades (10, 11) as claimed in one of claims 1 to 18.

20. The turbomachine as claimed in claim 19, characterized in that the trailing edge (14) of the guide blade (10) is at a constant distance from the leading edge (15) of an adjacent moving blade (11) at the rotor-side end (9) and in the middle region (8).